Appl. No. 09/634,764
Atty Docket No. 37310-000168/US

REMARKS

Claims 1-34 are pending in the present application. Claims 1, 12, 18 and 29 are independent.

Rejections Under 35 U.S.C. § 103

Claims 1-4, 6-11, 18-21 and 23-28 have been rejected under 35 U.S.C. § 103(a), as being unpatentable over Nagamitsu, et al. (U.S. Patent No. 5,467,401) hereinafter 'Nagamitsu'. This rejection is respectfully traversed.

Applicants submit that Nagamitsu fails to teach or suggest a method of modeling coherent wave propagation in a spatial environment comprising, at least computing wave propagation paths from a source to other regions in said spatial environment in priority order, as recited in independent claim 1 and somewhat similarly recited in independent claim 18.

The Examiner relies on Nagamitsu (see column 7, lines 5-17 and column 8, lines 39-41) as allegedly teaching computing wave propagation paths in a priority order. However, Applicants have reviewed these passages and find no teaching or suggestion of computing wave propagation paths in a priority order. Column 7, lines 5-17 of Nagamitsu describes sound rays being sent, reflected and received so an arrival time can be computed. Column 8, lines 39-41 of Nagamitsu discloses the use of weights corresponding to the arrival time of each sound ray. Neither passage describes computing wave propagation paths from a source to other regions in a priority order.

However, the Examiner alleges the following:

> "Practitioner in the art at the time of the invention was made would have found Nagamitsu disclosure of ordering of reflection of incident waves, directly from sound sources or indirectly from reflection of incident waves, directly from sound sources or indirectly from reflection waves, by assigning weight to arrival time or timestamp of wave arrivals with taking travel path into consideration in order to time stamp or weighted arrival time for incident waves (see col. 7, lines 5-17), and computing wave responses for all incident waves for each direction as in cols. 8, 9 and 10 implies the

2

claimed limitation of priority order of computing wave propagation in order to reflect sound waves incident directly form sound sources or indirectly from reflection such that memory capacity would be increased, and faster simulator in sound environment would be obtained as disclosed in col. 10, lines 2-11, lines 30-35, lines 43-45, for example."

Applicants submit that the Examiner has failed to make out a proper 103 rejection, because not all of the features in claims 1 and 18 are taught or suggested by Nagamitsu. The Examiner refers to "cols. 8, 9 and 10" broadly with no specificity to allege that computing wave propagation is implied, this is improper.

Column 10, lines 2-11, 30-35 and 43-45 of Nagamitsu are directed to impulse response data being stored into memory and the desire to decrease the amount of needed processing. None of these passages even remotely suggest computing wave propagation paths in a priority order, as recited in claims 1 and 18.

Accordingly, for at least these reasons, Applicants submit that claims 1 and 18, and those claims dependent thereon, are allowable over the prior art. Withdrawal of the rejection is kindly requested.

Claims 12-17 and 29-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagamitsu (5,467,401) in view of Reed et al. (5,574,466) This rejection is respectfully traversed.

Applicants submit that Nagamitsu fails to teach or suggest a method of modeling coherent wave propagation in a spatial environment, comprising at least computing a filter response for at least one path between said pairs in said plurality of sources based on constructed data structures, as recited in claim 12 and somewhat similarly in claim 29.

Nagamitsu describes an "impulse response computing unit 21 for reading out the echotime pattern from the memory 18 to compute an impulse response" (column 8, lines 51-53). Applicants submit that computing an impulse response based on an echo time pattern is not the

3

same as <u>computing a filter response based on constructed data structures</u>. The Examiner relies on Reed for an alleged teaching of a "tree data structure." However, Reed does not make up for the deficiencies in Nagamitsu; namely, Reed does not compute a filter response based on constructed data structures. Accordingly, the Examiner has failed to set forth a proper rejection under 35 U.S.C. 103, at least because the Nagamitsu/Reed combination fail to teach all of the features recited in claims 12 and 29.

For at least this reason, Applicants kindly request withdrawal of the rejection and allowance of claims 12-17 and 29-34.
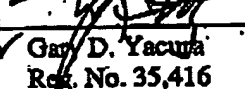
4

CONCLUSION

In view of the foregoing, Applicants submit that claims 1-34 are patentable over the relied upon references, and that the application as a whole is in condition for allowance. Early and favorable notice to that effect is respectfully solicited.

In the event that any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By _____ 45,274

    Gary D. Yacura
    Reg. No. 35,416
    P.O. Box 8910
    Reston, VA 20195
    (703) 668-8000

GDY/KB/cng

5